

### REMARKS

In the above-identified Office Action Claims 1 and 17, the sole independent claims, were rejected as being anticipated by the cited Hayes reference, while all of the claims were rejected as being obvious in view of various combinations of the cited prior art.

By this response Claims 18-32 have been cancelled while independent Claims 1 and 17 have been amended, and new Claims 33-36 have been added.

As now stressed in amended Claims 1 and 17, and in new independent Claim 33, a key feature of applicants' invention is that the photoelectric converter is reset by inputting a pulse signal to each of the reset switch and the transfer switch such that the reset switch and the transfer switch are turned on together at least in a predetermined period. Also, the above resetting operation is performed again after an electric charge is stored in the photoelectric converter and then transferred to the input terminal for an amplifier. This feature is described on page 12, line 14 through page 14, line 1 of the specification and Fig. 2.

In accordance with this invention an optical signal stored in the photoelectric converter is transferred to the input terminal for an amplifier through the transfer switch and it then read out from the amplifier section by turning off the transfer switch. Also, in order to avoid the problem that a residual electric charge is left in the photoelectric converter when the transfer switch is turned off, a resetting operation is performed to remove the residual electric charge. Thus, an important result of the claimed invention is that any residual electric charge in the photoelectric converter is fully removed before the read-out operation for the next frame.

The Hayes reference does not suggest this claimed invention. Instead, Hayes discloses in Fig. 3 that  $\Phi T2$  and  $\Phi R$  are simultaneously turned on for a resetting operation, but the resetting operation is not performed after the stored signal is read out as in the present invention. Moreover, the Guidash reference discloses in Fig. 3A that the reset switch and the transfer switch are simultaneously turned on to reset the photodiode

and that a reset level is obtained after a reading out operation. However, it does not disclose or suggest the key feature of the present invention that the photoelectric converter is reset by turning on the reset switch and the transfer switch together at least in a predetermined period and the above resetting operation is performed again after an electric charge is stored in the photoelectric converter and then transferred to the input terminal for an amplifier.

An Information Disclosure Statement is also being filed in this application, citing EP 0809303 (copy attached hereto) which corresponds to Japanese Patent Application No. H10-70261. Figs. 3(A) and 3(B) and the text related thereto discloses a transfer gate and a reset gate which are turned on together for a resetting operation, but that reference does not disclose applicants' invention as characterized above.

For all of these various reasons it is believed that this application is allowable, wherefore a formal Notice of Allowance is solicited.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



Attorney for Applicants

Registration No. 24613

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200